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EXAMINER	
PAPER NUMBER	
ART UNIT	PAPER NUMBER

DATE MAILED:

06/24/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 11, 122, 157, 187, 216, 218 and 261-264 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 11, 122, 123, 157, 187, 216, 218 and 261-264 are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

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The disclosure is objected to because of the following informalities: the specification is improper in that it is presented on both sides of the paper. However, the specification and the claims should be presented on separate pages. Appropriate correction is required.

Claims 11, 122, 123, 151, 187, 216, 218 and 261-264 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terminology "and/or" (all occurrences) is in the alternative and renders the claims indefinite because the scope of the invention cannot be determined. The terminology "selected from" (claim 122) is an improper markush terminology. Such terminology as "selected from the group consisting of" can be used to overcome the above rejection. The terminology "tissue (including scar tissue)" (claims 11, 122, 151, 187, 216 and 263) renders the claims indefinite because the scope of the invention cannot be determined i.e. it cannot be determined what other tissue besides scar tissue is encompassed by the claims. Claims 122, 123, 151, 187, 216, 218 and 261-264 are indefinite in that it cannot be determined if the same ate composition or method claims. Applicants are required to rewrite said claims in accordance with the proper domestic terminology. The preamble of

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claims 218 and 264 does not correspond to the preamble of claims 216 and 263, respectively.

Claims 11, 122, 123, 151, 187, 216, 218 and 261-264 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited in accordance with the specific embodiments. See M.P.E.P. §§ 706.03(n) and 706.03(z).

The terms "homologues", "analogues", "derivatives", "complexes", "esters", "fragments" and "sub-units" lack enablement in that the same encompass a large number of compounds of diverse structural formulas and molecular weights and there is no guidance in the specification as to how to go about selecting specific compounds. Further, there is a good reason to expect that such diverse compounds as hyaluronic acid having a molecular weight of 8,000,000, hyaluronic acid having molecular weight of 3,000 and hyaluronic acid derivitized with protein will have the same ability to facilitate penetration of active components.

The term prevention (claims 261-264) lacks enablement in that it encompasses prevention for a period of days, months, years and prevention for the rest of a patients life i.e. providing of permanent immunity. Since antibiotics are not known to be useful in providing of permanent immunity, the term "prevention" lacks enablement.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

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Claim 11 is rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Della Valle et al (U.S. Patent No. 4,736,024).

Della Valle et al disclose the use of hyaluronic acid as a topical vehicle for various active ingredients (see, for example, column 1). The claimed method is anticipated therefrom. In addition, if there are any differences between the claimed method and the reference's method, the differences would appear to be minor in nature and the claimed method, which falls within the scope of the prior art's disclosure would have been prima facie obvious from the said reference's disclosure to a person having ordinary skill in the art at the time the instant invention was made.

Claims 1, 122, 123, 151, 187, 216, 218 and 261-264 are rejected under 35 U.S.C. § 103 as being unpatentable over Della Valle et al (U.S. Patent No. 4,736,024) in combination with Della Valle et al (U.S. Patent No. 5,336,767) and Lowry (U.S. Patent No. 4,900,550).

Della Valle et al' 024 disclose the use of hyalurovic acid for topical administration of drugs. Della Valle et al' 767 disclose administration of esters of hyalyronic acid with drugs, including antibiotics, antibacterials and antiviral agents (column 10, lines 40-43). Therefore, a person having ordinary skill in the art at the time the instant invention was made would

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have been motivated to treat microbial infections by topical application of an antibiotic in combination with hyalurovic acid, especially in view of the teaching by the Lowry patent which disclose in columns 3-4, that a compoition containig hyaluronic acid as an effective cell penetrant. Therefore, a person having ordinary skill in the art at the time the instant invention was made would have been further motivated to use hyaluronic acid as a topical vehicle for drugs in order to enhance their penetration.

Any inquiry concerning this communication should be directed to Elli Peselev at telephone number (703) 308-4616.

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